

IV.—*Report on the Birds collected by the late Mr. Boyd Alexander (Rifle Brigade) during his last Expedition to Africa.*—Part II.* *The Birds of St. Thomas' Island.* By DAVID A. BANNERMAN, B.A., M.B.O.U., F.R.G.S.

IN the previous number of 'The Ibis' I published the first of a series of five papers dealing with the last collections formed by Boyd Alexander.

Following the same plan as I adopted when describing "The Birds of Prince's Island," I have included an excellent account of the island of St. Thomas from 'Boyd Alexander's Last Journey,' which his brother, Mr. Herbert Alexander, has kindly permitted me to make use of.

A complete list of the species of birds found on St. Thomas is given in the following pages, irrespective of whether Alexander obtained examples or not. An asterisk, attached to a species, signifies that the bird is represented in the Alexander collection, and in every case the specimens which he procured are enumerated.

I must again acknowledge the invaluable papers on the avifauna of the islands in the Gulf of Guinea published by Count Salvadori, which I have constantly consulted while working out the Alexander collections.

As in the case with Prince's Island, Count Salvadori has included in his paper a complete "Bibliography" of the literature dealing with St. Thomas up till 1902.

While working out the birds of this island, I have particularly made use of the following works :—

- BOCAGE. *Jorn. Sci. Lisboa*, 1891, pp. 77-87; id. 1905, pp. 72-90.
SALVADORI. *Mem. Accad. Sci. Torino*, 1903 (*Orn. Golfo d. Guinea*, ii. pp. 17-45).
SHELLEY. *Birds of Africa*, vols. i.-v., 1896-1912.
REICHENOW. *Vögel Afrikas*, vols. i.-iii., 1900-1905.

In the first of these papers Prof. Bocage gives excellent notes on the nidification of the majority of the species with

* For Part I. see 'Ibis,' 1914, pp. 596-631.

descriptions of the eggs, on the authority of Francisco Newton. Count Salvadori includes very few field-notes in his systematic treatise on the birds obtained by Signor Fea.

Throughout the following pages I have quoted Count Salvadori's paper on the birds of St. Thomas, which appeared in the Mem. Acc. Sci. Torino, 1903, pp. 17-45, as "Salvadori, Orn. Golfo d. Guinea, ii.;" also the paper published in 1905 by Professor Bocage, which is the most recent work on the birds of St. Thomas, and contains full references to previous writings. Wherever possible, I have given a reference to Shelley's 'Birds of Africa.'

All the islands in the Gulf of Guinea are rich in insular races, and St. Thomas is particularly favoured in this respect.

The following species and subspecies are probably restricted entirely to St. Thomas:—

1. *Onycognathus fulgidus* Hartl.
2. *Oriolus crassirostris* Hartl.
3. *Hyphantornis grandis* Gould.
4. *Heterhyphantes sancti-thomæ* (Hartl.).
5. *Lagonosticta perveini thomensis* Sousa. [Doubtful.]
6. *Neospiza concolor* (Bocage).
7. *Linurgus rufobrunneus thomensis* (Bocage).
8. *Cimyris newtoni* (Bocage).
9. *Elæocerthia thomensis* (Bocage).
10. *Speirops lugubris* (Hartl.).
11. *Zosterops ficedulina feæ* Salvad.
12. *Lanius newtoni* (Bocage).
13. *Prinia mollerii* Bocage.
14. *Turdus olivaceofuscus* Hartl.
15. *Amaurocichla bocagei* Sharpe.
16. *Terpsiphone atrochalybea* (Thoms.).
17. *Chætura thomensis* Hartert.
18. *Corythornis thomensis* Salvad.
19. *Flammea flammea thomensis* (Hartl.).
20. *Vinago sancti-thomæ* (Gmel.).
21. *Columba thomensis* Bocage.
22. *Haplopetia simplex* (Hartl.).

Boyd Alexander's collection is a very representative one, including most of the more interesting forms to be found on the island. No new species, however, were discovered, St. Thomas having been visited in 1900 by Signor Fea, who appears to have made a very complete survey of the island.

Special mention must be made of the rare Owl *Flammea flammea thomensis*, of which the Alexander collection possesses four fine examples obtained by José Lopez—Alexander's Portuguese collector—at Zalma. This Owl has not hitherto been represented in the British Museum collection.

Mr. Ogilvie-Grant, to whom I tender my sincere thanks, has been good enough to look through the proof-sheets of this paper. I am also deeply indebted to Mr. G. C. Robson, of the British Museum, for his aid in translating the Italian papers which it has been necessary to consult throughout this work.

The following account of St. Thomas has been pieced together from Alexander's last diary, to which allusion has already been made. It gives a very good idea of the conditions under which the collections were formed, and adds not a little to our knowledge of this small island, which has recently been so much in the public eye.

Boyd Alexander's Description of St. Thomas' Island.

About 11.30 on January the 18th, the Ilha das Cabras came into sight. The Peak of São Thomé was not visible, but the whole island has a mountainous appearance and is well wooded. We stayed at the port [São Thomé village] on the 19th to get things ready for a journey to the Peak, and the following day left for Monte Café, a large roça about 1900 feet up, on the road to São Thomé Peak. A little more than half way is the village of Trindade; another two hours from here brought us to Monte Café. Above Monte Café the ground still rises to some 5000 feet, forming the crest-line which is seen from the port, and only at times is the top of the Peak of São Thomé just visible. Our first day's collecting did not

produce much, but I got a pretty good idea of what was to be found, and I am afraid that it is doubtful if we shall get anything new. There is much cultivation even on the steep slopes of the hills, and practically there is very little of the virgin forest left. It is a wonderfully rich island. The soil is of a brownish red, and is capable of producing anything. The whole way up from the port to Monte Café are great cocoa-plantations, while clumps of banana-trees, scattered palms, and tall forest-trees give a wealth of verdure to the scenery. Towards 3 o'clock the sky becomes overcast from the north, and occasional showers fall. The manager of Monte Café . . . has promised two mules for to-morrow, when we move our camp still higher up, to Lake Amelia, where there is a good deal of virgin forest. We made an early start on the 22nd, and arrived at a collection of huts near Lake Amelia about 9.30. It is a steep "pull up" to this point, and almost an hour from Monte Café we entered thick forest with long-leaved plants forming part of the undergrowth. There were also gigantic cotton-trees, most of which present a weird appearance, for the cold damp atmosphere has hung their branches with lank lichen-growth that streams in the breeze like tresses of hair. Lake Amelia lies at nearly 5000 feet in altitude. It is about two hundred yards in circumference, and has the appearance of having been a crater. Its formation is a deep bed, and the sides are clothed with thin-stemmed trees rising in tiers. There is no water now, but only thick bog. At this altitude large clumps of bamboo are to be found; the coffee-tree does not seem to flourish, while the picturesque quinine-tree is in evidence.

We stayed and collected here from January the 23rd to the 26th, José always taking a different direction to mine. The forest-growth, which at first looked so promising, yielding no Ground-Thrushes such as *Alethe*, *Callene*, and *Turdinus*. These localities were particularly silent, and we obtained nothing more than what is in Salvadori's list. There seemed to be quite an absence of insect-life, and hardly an ant was to be seen.

On more than one occasion I got to within 500 feet of the Peak—that is to say, on a level with the eye from neighbouring ridges,—and I have my doubts whether it will be worth while to ascend it. The hill is not extensive enough, and not high enough, for the growth to alter. It is covered right up to its summit with the same forest-trees that are to be found on the neighbouring hills, and one can hardly expect the fauna to be different, as it was in the case of the Peak of Fernando Po. It is a difficult country to work; the valleys, full of thick wood and tangle, are extraordinarily deep, and many are quite impossible to descend into, while water in the dry season is not plentiful. There has not been much rain, but generally towards 6 o'clock a dense cold mist from the south drives over the hills in thick clouds. It is very depressing, coming over in a moment of time, enveloping everything and blurring the trees to phantoms. Very often at sunset there are some fine colour-effects, and on the 25th there was a particularly impressive one. Looking southward from my camp, a lofty ridge of wooded hills, jagged in outline, stood out in clear contrast to a thick layer of cumulus clouds directly behind, that had shaped itself into the form of rugged hills and peaks, looking for all the world like snow-capped mountains against the wooded chain in the foreground, and this was further brought out into contrast by a dark leaden sky above.

Many of the smaller hills are cultivated, in places even the lower slopes of the Peak itself, giving the impression that every available bit of ground in this rich island is seized upon and made the most of.

The interior of the island has a peculiar geographical aspect; one looks down into a large and deep crater, which practically forms the very centre of the island. Here the wealth of St. Thomas becomes apparent, for it has a very fertile aspect, with the foliage of the cocoa-plantations, the coffee-trees, and the big clumps of bananas.

José is working very well, and his skins have good form. We have also been lucky in the weather—bright sunny mornings, as a rule.

On January 26 we left for the port [São Thomé village]. The weather here is still fine, in spite of its being the rainy season. A pleasant breeze always gets up from the south-east about 10 o'clock and blows till about 4 o'clock. Our collections from the hills number fifty specimens in all.

On the 4th of February José left with the carriers for Zalma, a place about one and a half hours' walk south from here, where he is going to collect. In that neighbourhood the ground is chiefly owned by the São Thomé natives. They are a poor people; all the good land has been taken from them, and they now only possess small plots of maize near the coast. José has a good camp, and I go out every day to see him and shoot on the way.

On February the 12th José arrived in from his camp: he had something like forty-five specimens, including four examples of the rare Owl, *Flammea flammea thomensis*; but I do not think there is anything new, unless it is one of the Ground-Pigeons* (*Haplopelia*). The same day we left about 12.30 in the s.s. 'Tonga' for Annobon, which gave me the opportunity of seeing the whole of the western coast of St. Thomas. The island presents a mountainous and rugged appearance, and some of the peaks are very remarkable in their shape, especially the Dog Peak. It is like a gigantic obelisk, so regular in its contour that it is difficult to realise Nature alone has carved it.

Systematic List.

1. *Onycognathus fulgidus*.

Onycognathus fulgidus Hartl.; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 31; Bocage, Journ. Sci. Lisboa, 1905, p. 78; Shelley, Birds of Africa, v. 1906, p. 97.

This Starling is confined to St. Thomas, where it is said to be exceedingly abundant.

Curiously enough, Alexander did not obtain a single specimen.

* None of the Ground-Pigeons obtained by Alexander proved to be new to science. One species only was represented on St. Thomas, *Haplopelia simplex* (Hartl.), of which a large series was procured.

2. **Oriolus crassirostris*.

Oriolus crassirostris Hartl. ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 30 ; Bocage, Jorn. Sci. Lisboa. 1905, p. 77 ; Shelley, Birds of Africa, v. 1906, p. 21, pl. xliii.

a. ? Imm. (No. 23). Lake Amelia. 23. i. 09.

b-e. ♂ ♂ ♂ ♀ ad. (Nos. 18, 21, 22, 20). Lake Amelia. 24. i. 09.

f. ♂ ad. (No. 19). Lake Amelia. 25. i. 09.

Iris red, bill pale claret-red.

A very good plate of this Oriole is given by Shelley in which both the adult and immature birds are figured.

In the series obtained by Alexander an apparently adult female differs from the male only in having the upper part of the breast and throat greyish, mottled with black and white on the upper part of the throat and chin. In the male these parts are uniform black, and in the immature bird white.

All the specimens enumerated agree exactly with Shelley's plate, with the exception of No. 19. This example is remarkable, as it resembles the fully adult male in plumage, but has a wide yellowish-grey patch on the crown of the head, extending from the base of the bill to the hind part of the crown, a distance of 26 mm. The rest of the head and neck is black.

The Stout-billed Black-headed Oriole is confined to St. Thomas, where it is stated by both Bocage and Fea to be very abundant throughout the island.

Alexander found it in the forests of the higher altitudes. He remarks that its note is a clear double whistle, and that it was breeding at the time of his visit.

3. **Vidua principalis*.

Vidua principalis (Linn.) ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 29 ; Bocage, Jorn. Sci. Lisboa, 1905, p. 82.

Vidua serena Linn. ; Shelley, Birds of Africa, iv. 1905, p. 16.

- a.* ♂ ad. (No. 4). Monte Café. 20. i. 09.
b, c. ♂ ♂ ad. (Nos. 38, 39). Lake Amelia. 25. i. 09.
d. ♂ ad. (No. 127). Zalma. 4. ii. 09.

The White-breasted Whydah is said by Newton to be very plentiful on the island of St. Thomas. It is not found on Prince's Island or Annobon, but Alexander obtained it on Fernando Po.

In Africa it is very generally distributed.

In St. Thomas Alexander found it common on the hills near Monte Café. All the specimens obtained were in breeding plumage.

4. **Steganura paradisea*.

Steganura paradisea (Linn.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 30; Bocage, Journ. Sci. Lisboa, 1905, p. 82.

Vidua paradisea Shelley, Birds of Africa, iv. 1905, p. 25.

- a.* ♂ ad. (No. 128). Zalma. 4. ii. 09.

The single example of the Paradise Whydah, obtained by Alexander, is in full breeding-plumage.

Shelley gives the range of this species as "Africa generally south of 17° N. lat.," and notes that "the only specimen recorded from St. Thomas was probably a cage-bird." The example which Alexander obtained shows no sign of having been in captivity, and is, in fact, a particularly fine specimen in beautiful plumage. It seems probable that if *S. paradisea* is not a genuine inhabitant of St. Thomas it may occasionally wander there from the mainland. It is not found in Fernando Po.

5. **Pyromelana flammiceps*.

Pyromelana flammiceps Swains.; Bocage, Journ. Sci. Lisboa, 1905, p. 38; Shelley, Birds of Africa, iv. 1905, p. 104.

- a.* ♂ ad. (No. 73). Near São Thomé. 31. i. 09.
b, c. ♂ ♂ ad. (Nos. 69, 70). " " " 1. ii. 09.
d. ♂ ad. (No. 72). " " " 2. ii. 09.
e. ♂ ad. (No. 129). Zalma. 7. ii. 09.

The Fire-crowned Bishop-bird has been obtained in

St. Thomas since 1893. Before that date the bird does not appear to have been taken on the island. It is probably very locally distributed, as Signor Fea in 1900 failed to obtain specimens.

Boyd Alexander remarked that this species was not numerous near São Thomé and was to be found frequenting waste land.

6. **Pyromelana aurea*.

Pyromelana aurea (Gmel.) ; Shelley, Ibis, 1886, p. 354, pl. ix. fig. 2 ; id. Birds of Africa, iv. 1905, p. 79 ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 30 ; Bocage, Journ. Sci. Lisboa, 1905, p. 82.

a, b. ♂ ♂ ad. (Nos. 81, 82). Zalma. 1. ii. 09.

c. ♂ ad. (No. 113). „ 7. ii. 09.

d, e. ♂ ♂ ad. (Nos. 111, 112). „ 10. ii. 09.

The Golden-backed Bishop-bird is apparently very plentiful on the island of St. Thomas. The series obtained by Alexander are all males in beautiful breeding-plumage. It is remarkable that, though males are frequently obtained, the females are rarely met with. In fact, up till 1912, when Mr. Willoughby P. Lowe obtained a single female of this species at St. Paul de Loanda, I am not aware that an example had ever been secured. The female which Mr. Lowe collected I described in 'The Ibis,' 1912, p. 232.

Very little is known with regard to the range of this species. St. Thomas is the only island in the Gulf of Guinea upon which it is to be found. The type is supposed to have come from Benguela. Single specimens have also been obtained from Gaboon, the Quanza River, and St. Paul de Loanda. St. Thomas would appear to be the true home of *P. aurea*, where, however, Alexander writes "It is not common, frequenting marshland and the vicinity of plantations."

7. **Quelea erythroptus*.

Quelea erythroptus (Hartl.) ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 29 ; Bocage, Journ. Sci. Lisboa, 1905, p. 81 ; Shelley, Birds of Africa, iv. 1905, p. 117.

a. ♂ ad. (No. 5). Monte Café. 20. i. 09.

Iris brown; bill blackish horn-colour; legs and feet brownish flesh-colour.

St. Thomas is the type locality of the Dark-throated Red-headed Dioch, where it is said to be abundant. It has an extensive range on the mainland.

Alexander found it frequenting the maize-plots on the hill.

8. **Spermestes cucullata*.

Spermestes cucullata Swains.; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 29; Bocage, Journ. Sci. Lisboa, 1905, p. 82; Shelley, Birds of Africa, iv. 1905, p. 167.

a. ♀ ad. (No. 79). Near São Thomé. 1. ii. 09.

b. ♂ juv. (No. 125). Zalma. 5. ii. 09.

Alexander found Swainson's Bronze-Mannikin common on St. Thomas. It was breeding at the time of his visit.

9. *Lagonosticta perreini thomensis*.

Lagonosticta thomensis Sousa; Salvadori, Orn. Golfo d. Guinea, i. 1903, p. 28; Bocage, Journ. Sci. Lisboa, 1905, p. 81.

Estrilda perreini thomensis Shelley, Birds of Africa, iv. 1905, p. 219.

According to Count Salvadori this little Weaver-Finch is very closely allied to *L. incana* and by some considered only as a variety.

Shelley considered it to be a subspecies of *L. perreini* and scarcely recognisable, while Reichenow believed it to be a distinct species!

It appears to be doubtful whether the bird described by Sousa as *E. thomensis* ever inhabited St. Thomas. The type is said to have been obtained there by Molier in 1885, but Shelley points out that no mention is made of the specimen in the list of his collection published in 1887.

A second specimen was obtained according to Shelley at Guadalupe, which is apparently a village on the coast of St. Thomas, but, as Shelley remarks, it is by no means

impossible for a single bird to have strayed across from the mainland.

The type is said to be preserved in the Coimbra Museum.

Apart from these two specimens, no other examples have ever been met with on the island of St. Thomas, and until further evidence is forthcoming we may safely assume that it no longer exists as a resident form.

10. **Estrilda astrild sousæ*.

Estrilda astrild sousæ Reichw. Vög. Afrikas, iii. 1904, p. 182.

Estrilda astrild (Linn.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 28.

Estrilda occidentalis sousæ Shelley, Birds of Africa, iv. 1905, p. 200.

Estrilda astrilda Bocage, Journ. Sci. Lisboa, 1905, p. 81.

a. ♂ ad. (No. 126). Zalma. 6. ii. 09.

My remarks on this subspecies will be found in my recent paper on "The Birds of Prince's Island," published in the last number of 'The Ibis' (p. 607).

Unfortunately only the one specimen cited above was obtained, and I am unable therefore to express any opinion as to whether this subspecies is valid.

I cannot determine the status of Sousa's Waxbill on St. Thomas, for no field-notes are supplied by Alexander. Newton found them "not rare," and was of opinion that they had been introduced.

11. **Heterhyphantes sancti-thomæ*.

Heterhyphantes sancti-thomæ (Hartl.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 28; Bocage, Journ. Sci. Lisboa, 1905, p. 80.

Sharpia sancti-thomæ Shelley, Birds of Africa, iv. 1905, p. 335.

a. ♂ ad. (No. 6). Monte Café. 20. i. 09.

b. ♂ ad. (No. 15). " " 22. i. 09.

c. ♂ ad. (No. 46). Lake Amelia. 23. i. 09.

d, e. ♀ ♀ ad. (Nos. 44, 47). " " 24. i. 09.

f. ♀ ad. (No. 45). " " 25. i. 09.

g. ♀ imm. (No. 33). Zalma. 5. ii. 09.

Iris brown ; upper mandible brownish horn-colour, lower mandible pale horn ; legs and feet pale flesh-colour.

The St. Thomas Weaver-bird is restricted to the island after which it is named.

The young female (No. 33) which Alexander obtained differs from the adult in lacking the black on the head and crown and the rufous yellow on the sides of the neck, the plumage of the entire upper parts being dull brown shading into rust-colour on the upper tail-coverts, the throat white and the underparts whitish, washed with pale rust-brown. The bill is similarly coloured to the adult.

Alexander has supplied the following note on this species:—"Frequents the wooded portions of the hills. It is much addicted to running up the branches in search of insects, after the manner of a Woodpecker."

12. **Hyphantornis grandis*.

Hyphantornis grandis Gould ; Salvadori, Orn. Golfo d. Guinea, iv. 1903, p. 27 ; Bocage, Journ. Sci. Lisboa, 1905, p. 80 ; Shelley, Birds of Africa, iv. 1905, p. 430.

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| a. ♂ ad. (No. 17). | Rio Grande. | 27. i. 09. |
| b. ♀ ad. (No. 132). | Zalma. | 4. ii. 09. |
| c. ♀ ad. (No. 92). | „ | 4. ii. 09. |
| d. ♀ ad. (No. 91). | „ | 7. ii. 09. |
| e. ♀ ad. (No. 93). | „ | 8. ii. 09. |

The Great Black-headed Weaver-bird is very abundant on St. Thomas, to which island it is restricted. Alexander notes that it is found in the vicinity of the cocoa-plantations on the lower ground.

The specimens collected call for no special remark.

13. *Hyphantornis capitalis*.

Hyphantornis capitalis (Lath.) ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 27 ; Shelley, Birds of Africa, iv. 1905, p. 438.

Apparently there is some doubt as to whether this Weaver-bird is actually an inhabitant of St. Thomas. Bocage referred a specimen which he obtained from St. Thomas to

this species in 1861, but omitted the species from his last paper (1905). Since that date no example has been obtained, and none of the ornithologists who have visited the island in recent years mention having seen it.

It may therefore be inferred that if the specimen in the Lisbon Museum is really referable to this species it must have been a chance straggler to the island.

H. capitalis is an inhabitant of the Niger district.

14. **Serinus hartlaubi*.

Serinus hartlaubi (Bolle) ; Shelley, Birds of Africa, iii. 1902, p. 197, pl. xxv. fig. 1.

Serinus icterus (Vieill.) ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 26 ; Bocage, Journ. Sci. Lisboa, 1905, p. 80.

a, b. ♂ ad. et ♂ imm. (Nos. 88, 89). São Thomé. 23. ii. 09.

The chin in specimen No. 89 is pure white, while in the other example it is canary-yellow ; apparently the white chin is a sign of immaturity.

Serinus hartlaubi has a wide distribution on the west coast, where it is abundant.

Count Salvadori considers it not improbable that it was introduced into St. Thomas, as it has been into St. Helena.

15. **Linurgus rufobrunneus thomensis*.

Linurgus thomensis (Bocage) ; Shelley, Birds of Africa, iii. 1902, p. 173 ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 25 ; Bocage, Journ. Sci. Lisboa, 1905, p. 79.

a. ♀ ad. (No. 16). Monte Café. 22. i. 09.

b. ♂ ad. (No. 14). Lake Amelia. 23. i. 09.

c-e. ♂ ♀ ♀ ad. (Nos. 80, 75, 78). Near São Thomé. 31. i. 09.

This is another of the many subspecies confined to the island. In Prince's Island its place is taken by the closely allied species *L. rufobrunneus*.

Alexander remarks that it is not common. It is found on the higher ground. Its note is a musical pipe.

16. *Neospiza concolor*.

Neospiza concolor (Bocage); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 26; Bocage, Journ. Sci. Lisboa, 1905, p. 80.

Not obtained by Alexander.

Count Salvadori has proposed the generic name *Neospiza* for this species, instead of placing it, as has been done by former writers, in the genus *Amblyospiza*.

This Weaver-Finch is restricted to the island of St. Thomas.

17. **Cinnyris newtoni*.

Cyanomitra newtoni (Bocage); Shelley, Birds of Africa, ii. 1900, p. 134, pl. v. fig. 1.

Cinnyris newtoni Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 22; Bocage, Journ. Sci. Lisboa, 1905, p. 75.

a-d. ♂ ad. (Nos. 40-43). Lake Amelia. 25. i. 09.

The St. Thomas Yellow-breasted Sunbird is also confined to the island, where, according to Alexander, it is generally distributed.

Curiously enough, all the examples collected proved to be males, in adult plumage.

This species was hitherto represented in the British Museum by three specimens only, one of which is said to be a female, although, as Shelley remarked, it looks uncommonly like an immature male. This bird is fully described in Shelley's 'Birds of Africa.'

18. **Elæocerthia thomensis*.

Elæocerthia thomensis (Bocage); Shelley, Birds of Africa, ii. 1900, p. 119, pl. v. fig. 2; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 22; Bocage, Journ. Sci. Lisboa, 1905, p. 75.

a. ♂ ad. (No. 31). Lake Amelia. 24. i. 09.

b, c. ♂ ♀ ad. (Nos. 32, 33). „ „ 25. i. 09.

This fine Sunbird is confined to the island of St. Thomas, and the three beautiful skins which Alexander obtained are a welcome addition to the National Collection. The species was hitherto represented by the type and one other specimen.

The plumage of the sexes is alike. Shelley placed this species in the genus *Eleocerthia*, on account of the metallic colours being confined to the extreme ends of the feathers. It is, however, the only member of the genus which has a graduated tail—in all the others the tail is square, as in *E. verreauxi*.

Alexander notes that *E. thomensis* is not common and is found in thick wood.

19. **Zosterops ficedulina feæ*.

Zosterops feæ Salvadori, Bull. Mus. Tor. 1901, no. 414, p. 1; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 23; Bocage, Journ. Sci. Lisboa, 1905, p. 77.

a, b. ♂ ♀ ad. (Nos. 114, 115). Zalma. 5. ii. 09.

c. ♀ ad. (No. 116). „ 8. ii. 09.

The White-eye of St. Thomas has been described by Count Salvadori in the paper cited above.

It differs from *Zosterops ficedulina*, which is the form peculiar to Prince's Island, in being much darker on the underparts and more greyish green on the upperparts; the crown of the head is much brighter, and the bill is yellowish horn-colour, tipped with dark horn. In size there is not much difference between the two island forms. Both are very distinct from the Annobon species.

Shelley in his 'Birds of Africa,' vol. ii. p. 186, mentioned that the Lisbon Museum contained a specimen of a *Zosterops* said to have been obtained on St. Thomas in 1880. As no form of White-eye was known at that time to inhabit St. Thomas, Shelley wrongly concluded that the specimen had probably come from Prince's Island or Annobon.

No doubt the specimen was correctly labelled. *Z. f. feæ* could not possibly be confused with *Z. griseovirescens* from Annobon, the latter being a much larger bird and a very well-marked species.

Fea notes that this subspecies has the same habits as *Speirops lugubris*.

20. **Speirops lugubris*.

Speirops lugubris (Hartl.); Shelley, Birds of Africa, ii. 1900, p. 201; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 23.

Zosterops lugubris Bocage, Journ. Sci. Lisboa, 1905, p. 77.

a, b. ♂ ♀ ad. (Nos. 48, 49). Monte Café. 21. i. 09.

c-f. ♂ ♂ ad. (Nos. 13, 50, 51, 52). Lake Amelia. 23. i. 09.

The Brown White-eye, the sexes of which are alike, is confined to the island of St. Thomas, where it is apparently very plentiful.

Alexander obtained a series of beautiful skins. He notes that it is very common and generally to be seen in small parties. It has a pretty song, not unlike that of the Blackcap. In the early mornings the valleys are full of them singing.

Fea remarks that it is usually found in flocks. It frequents shady spots and during its short flights it emits a loud plaintive note.

21. *Lanius newtoni*.

Lanius newtoni (Bocage); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 22; O.-Grant, Nov. Zool. ix. 1902, p. 467.

Fiscus newtonii Bocage, Journ. Sci. Lisboa, 1905, p. 76.

Boyd Alexander did not obtain an example of this Shrike, which is apparently peculiar to St. Thomas.

22. **Prinia mollerii*.

Prinia mollerii Bocage; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 24; Bocage, Journ. Sci. Lisboa, 1905, p. 78.

a. ♂ ad. (No. 58). Lake Amelia. 25. i. 09.

b. ♂ ad. (No. 123). Zalma. 5. ii. 09.

c. ♂ ad. (No. 124). „ 6. ii. 09.

Apparently confined to St. Thomas.

Fea remarks: "This bird has a monotonous note, but its movements are full of grace. It is very lively and always on the move. It produces a rattling noise made by the beating of its wings, like the scraping of a shovel."

Alexander found it well distributed over the island. The male when courting the female makes loud wing-beats, like the first patter of heavy rain on foliage, at the same time it will often perform a characteristic flight, a series of 'ups and downs' in the air like a switch-back motion.

23. **Turdus olivaceofuscus*.

Turdus olivaceofuscus Hartl. ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 25 ; Bocage, Journ. Sci. Lisboa, 1905, p. 78.

- a, b.* ♂ ♀ imm. (Nos. 10, 24). Lake Amelia. 23. i. 09.
c, d. ♂ ♀ ad. (Nos. 12, 26). „ „ 24. i. 09.
e. ♂ imm. (No 25). „ „ 25. i. 09.

The St. Thomas Thrush, which is peculiar to the island, is said by Francisco Newton to be common and universally distributed.

The figure given of this species in Seebohm's 'Monograph of the Thrushes' does not convey a correct idea of the bird. The feathers of the throat and belly are white narrowly tipped with pale brown. This has already been pointed out by Count Salvadori.

24. *Amaurocichla bocagei*.

Amaurocichla bocagei Sharpe, P. Z. S. 1892, p. 257, pl. xx. fig. 1 ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 25 ; Bocage, Journ. Sci. Lisboa, 1905, p. 79.

Neither Alexander nor Fea appear to have seen this bird during their visits to the island.

The type-specimen, which is in the British Museum, was sent for comparison to the late Dr. Sharpe by his friend Barboza du Bocage, who had received it from Francisco Newton.

Sharpe gives a good figure of the bird and created for it a new genus, *Amaurocichla*, which he characterised as follows :—“ Similar to *Crateroscelis*, but distinguished by the shape of the wing, the first primary being nearly as long as the second. Additional characters are : The bill is

as long as the head, and rictal bristles are absent, while the tail-feathers are somewhat acuminate."

The type specimen was obtained at São Miguel, on the west coast of St. Thomas.

In the Lisbon Museum there are two more specimens of this rare species, apparently both males.

25. **Terpsiphone atrochalybea*.

Terpsiphone atrochalybea (Thoms.) ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 21 ; Bocage, Journ. Sci. Lisboa, 1905, p. 76.

- | | | |
|-----------------|--------------|------------|
| a. ♂ (No. 11). | Lake Amelia. | 23. i. 09. |
| b. ♀ (No. 108). | Zalma. | 5. ii. 09. |
| c. ♀ (No. 108). | „ | 8. ii. 09. |

Thomson originally described *T. atrochalybea* (Ann. Nat. Hist. x. 1842, p. 204) from Fernando Po, but it would appear that the bird is only an accidental straggler to that island or more likely that the locality is erroneous. *T. atrochalybea* has not again been met with in Fernando Po, although the island has been well explored by ornithologists. It is probable that the type-specimen came from St. Thomas, and that the species is restricted to that island.

Alexander has the following notes in regard to this species:—"Frequents the cocoa-plantations and forest-growth. The alarm-note is a scolding 'tiz.' It is now breeding (23. i. 09). It makes a neat compact nest, cup-shaped and composed of the long tree-lichen which hangs from the branches in the forest; the interior is composed of fine fibre. The eggs are white, marked at the larger end with rusty spots."

26. *Hirundo rustica*.

Hirundo rustica Linn. ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 21 ; Bocage, Journ. Sci. Lisboa, 1905, p. 76.

A single record of the Swallow having appeared in St. Thomas is given by Moller (*cf.* L. Viera, Instituto J. Sci. e Lit. Coimbra, xi. 1887, p. 2).

27. **Chrysococcyx smaragdineus*.

Chrysococcyx smaragdineus (Swains.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 35; Bocage, Journ. Sci. Lisboa, 1905, p. 35.

a. ♂ ad. (No. 7). Monte Café. 20. i. 09.

b. ♂ ad. (No. 90). Zalma. 10. ii. 09.

The Emerald Cuckoo was first obtained in St. Thomas by Weiss in 1847; it does not appear to have been procured again until Alexander visited the island and shot the two specimens recorded above; he remarks that they frequented the high trees at Monte Café, with which the hillside was scattered. *C. smaragdineus* is probably a very rare species in the island.

28. **Micropus affinis*.

Cypselus affinis (Gray); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 31; Bocage, Journ. Sci. Lisboa, 1905, p. 75.

a, b. ♀ ♀ ad. (Nos. 56, 57). São Thomé. 28. i. 09.

c. Unlabelled specimen.

This widely distributed Swift is according to Fea "not rare on the island of St. Thomas."

29. *Chætura thomensis*.

Chætura thomensis Hartert, Bull. B. O. C. x. 1900, p. 53; id. Nov. Zool. viii. 1901, p. 425, pl. vii. fig. 1; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 31; Bocage, Journ. Sci. Lisboa, 1905, p. 75.

a. ♂ ad. (No. 53). Monte Café. 21. i. 09.

b. ♂ ad. (No. 74). Near São Thomé. 31. i. 09.

c. ♀ ad. (No. 131). Zalma. 5. ii. 09.

This Swift is apparently confined to St. Thomas.

Alexander remarks that it is "fairly common in the higher altitudes."

30. *Coracias garrula*.

Coracias garrula Linn.; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 33; Bocage, Journ. Sci. Lisboa, 1905, p. 73.

Evidently a straggler to the island, the Roller has been taken once in St. Thomas by Weiss, and the specimen is said by Count Salvadori to be in the Hamburg Museum.

31. *Halcyon dryas*.

Halcyon dryas Hartl. ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 32 ; Bocage, Journ. Sci. Lisboa, 1905, p. 73.

This Wood-Kingfisher, so common in Prince's Island, is, judging from the number of times it has been obtained, of very rare occurrence in St. Thomas. There is a single example in the British Museum from that island, and, according to Salvadori, the Lisbon Museum possesses a skin obtained there by Francisco Newton many years ago.

32. **Corythornis thomensis*.

Corythornis thomensis Salvadori, Ibis, 1902, p. 568, pl. xiii. ; id. Orn. Golfo d. Guinea, ii. 1903, p. 32 ; Bocage, Journ. Sci. Lisboa, 1905, p. 74.

a. ♂ ad. (No. 35).	Rio Grande.	27. i. 09.
b. ♂ imm. (No. 36).	„ „	„
c. ♂ imm. (No. 37).	„ „	„
d. ♀ ad. (No. 34).	„ „	„
e. ♀ ad. (No. 54).	„ „	28. i. 09.
f. ♂ ad. (No. 119).	Zalua.	5. ii. 09.
g. ♂ ad. (No. 118).	„	7. ii. 09.
h. ♂ ad. (No. 117).	„	7. ii. 09.

C. thomensis is a very distinct form, first described by Count Salvadori. From *Corythornis galerita* he distinguished it as follows:—

“*Corythornis, C. galeritæ* similis, sed gastræo castaneo, loris nigris, regione malari castanea paulum nigro tincta, tæniisque transversis pilei cæruleo-viridibus, seu malachitaceis, diversa.

“Long. tot. mm. 145–147 ; al. 59 ; caud. 28 ; rostri culm. 32.

“*Av. junior*. Regione malari, loris, capitis lateribus, pectore medio ejusque lateribus fusco-nigris ; dorso maculis cæruleo-malachitaceis notato ; rostro nigro.”

Alexander having obtained a series of both forms from St. Thomas and Prince's Island, I have had an opportunity of closely comparing the two races.

It is noticeable that the blue colouring of the back in *C. galerita* is very different, being less bright and of a more purplish blue than in *C. thomensis*.

Moreover, the underparts are much deeper chestnut in the St. Thomas bird and lack the whitish belly of *C. galerita*. A very pronounced character is that of the blackish-bespeckled lores and cheeks of *C. thomensis*, which in the Prince's Island bird are practically uniform chestnut; also the base of the bill is always blackish, instead of uniformly coloured as in *C. galerita*.

The two immature birds, Nos. 36 and 37, obtained by Alexander bear out Count Salvadori's description. The beak is black, the crown of the head and nape are similar to the adult; but the parts which are chestnut in the adult bird are in the young blackish brown, only shading into chestnut on the lower part of the belly and under tail-coverts.

On comparing the young of the species with that of *C. galerita*, the differences which exist are very remarkable. In *C. galerita* young birds are very similar in plumage to the adults and differ from them only in having the cheeks and lores blackish and in the blackish colour of the bill. The plumage of the young bird in *C. thomensis* has already been described, and is entirely different from that of the adult.

Alexander remarks that it is not a common bird along the river.

33. **Agapornis pullaria*.

Agapornis pullaria (Linn.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 35; Bocage, Journ. Sci. Lisboa, 1905, p. 73.

a. ♂ ad. (No. 71). Near São Thomé. 1. ii. 09.

b. ♂ ad. (No. 130). Zalma. 4. ii. 09.

Alexander has no notes on this species. Apparently it is not rare and is found on the island throughout the year.

Signor Fea obtained specimens in August and October 1900.

On the west coast of Africa the range of the Rosy-faced Love-bird extends from the Gold Coast to the Congo.

34. **Flammea flammea thomensis*.

Strix thomensis (Hartl.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 34; Bocage, Journ. Sci. Lisboa, 1905, p. 73.

a, b. ♂ ♂ ad. (Nos. 86, 87). Zalma. 10. ii. 09.

c, d. ♀ ♀ ad. (Nos. 84, 85). „ 11. ii. 09.

This fine dark form of the Barn-Owl is confined to the island of St. Thomas, where it is evidently not yet entirely exterminated, as Fea obtained a pair and Alexander four examples during the time they spent on the island. It is, as Count Salvadori remarks, a very rare bird in collections, and the four examples enumerated above are new to the British Museum collection.

35. *Otus leucopsis*.

Athene leucopsis Hartlaub, Rev. et Mag. de Zool. 1849, p. 496.

Scops scapulatus Bocage, Journ. Acad. Sci. Lisboa, 1888, p. 229.

Pisorhina leucopsis Reichenow, Vögel Afrikas, i. 1901, p. 667.

Pisorhina scapulatus Reichenow, Vögel Afrikas, i. 1901, p. 668.

Scops leucopsis Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 33; Bocage, Journ. Acad. Sci. Lisboa, 1891, p. 77; id. 1905, p. 72.

Scops leucopsis (Forma rufa) Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 34.

Unfortunately I have not been able to examine any specimens of Scops Owl from St. Thomas, and therefore can arrive at no conclusions on the supposed validity of *Otus scapulatus* (Boe.). Count Salvadori obtained through Signor Fea three examples of *Otus* from St. Thomas. The first, he says, is similar to the figure of *O. leucopsis*, with a plumage

of greyish brown becoming pale on the underparts. The other two agree with *O. scapulatus* (Boc.). Count Salvadori is of opinion that the two forms belong to one species, which is remarkable for having the posterior part of the tarsus bare, and considers that it may even have to be placed in a separate genus. Bocage, in his last paper, agrees with Salvadori in his conclusions, which are probably correct.

Dr. Reichenow appears to consider the two species quite distinct, and keeps them so in his work. I prefer, however, to follow Count Salvadori, who appears to have thoroughly gone into the question.

36. *Milvus ægyptius*.

Milvus ægyptius (Gmel.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 33; Bocage, Journ. Sci. Lisboa, 1905, p. 73.

The Egyptian Kite has been obtained on several occasions in St. Thomas. According to Count Salvadori there is a skin of this species in the Hamburg Museum, collected in the island, and Bocage records five males and females of this Kite in the Lisbon Museum.

37. **Phaëthon lepturus*.

Phaëthon lepturus Lacép. et Daud.; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 41; Bannerman, Ibis, 1914, p. 620.

Phaëthon candidus Bocage, Journ. Sci. Lisboa, 1905, p. 89.

a-d. ♂ ♂ ♀ ♀ (Nos. 61, 62, 59, 60). Ilha das Cabras, St. Thomas. 30. i. 09.

The Tropic-bird does not appear to inhabit the main island of St. Thomas, but is very common on the "Isle of Goats"; it is also found on Sette-Pedras and Rolas islets, where Bocage (Journ. Sci. Lisboa, 1891, p. 85) says that it is very common, and where it nests in the crevices of the rocks.

38. *Sula leucogastra*.

Sula leucogastra (Bodd.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 41; Bocage, Journ. Sci. Lisboa, 1905, p. 90.

Bocage received specimens from Francisco Newton, which he had procured on the islets of Sette-Pedras, where they apparently breed.

39. *Phalacrocorax africanus*.

Phalacrocorax africanus (Gmel.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 41; Bocage, Journ. Sci. Lisboa, 1905, p. 90.

The African Cormorant is common all round the island according to Newton.

40. *Phœnicopterus roseus*.

Phœnicopterus erythræus Verr.; Finsch et Hartl. Vög. Ost-Afrik. 1870, p. 795; Bocage, Journ. Sci. Lisboa, 1905, p. 88.

Phœnicopterus roseus Pall.; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 40.

This bird is mentioned by Finsch and Hartlaub as having been obtained on St. Thomas by Weiss, also by Sousa (Journ. Sci. Lisboa, 1888, p. 153; 1891, p. 87). All these references appear to refer to the same specimen, which is said to be in the museum at Bremen. The specimen should be re-examined, as Count Salvadori believes that it may prove to be *P. minor*, of which species Fea obtained a specimen on Prince's Island.

41. *Lampribus olivacea*.

Lampribus olivacea (Du Bus); Salvadori, Orn. Golfo d. Guinea, i. 1903, p. 39; Bannerman, Ibis, 1914, p. 622.

Comatibus olivacea Bocage, Journ. Sci. Lisboa, 1905, p. 86.

According to Bocage, Newton obtained this Ibis on several occasions in St. Thomas.

As considerable confusion existed with regard to the status of *Lampribus olivacea* (Du Bus), I have been at considerable pains to clear up the matter. A full discussion will be found in my paper "On the Birds of Prince's Island," which appeared in the last number of 'The Ibis.'

42. *Ciconia alba*.

Ciconia alba Bechst.; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 39; Bocage, Journ. Sci. Lisboa, 1905, p. 86.

Hartlaub (Orn. Westafr. p. 275) records an example of the White Stork obtained on St. Thomas by Weiss.

43. *Ardea gularis*.

Ardea gularis Bosc; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 22; Bocage, Journ. Sci. Lisboa, 1905, p. 85.

Bocage obtained specimens of this Heron from both St. Thomas Island and Rolas Islet, where it is doubtless resident.

44. *Egretta garzetta*.

Herodias garzetta (Linn.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 38; Bocage, Journ. Sci. Lisboa, 1905, p. 85.

Moller is said to have obtained an example of the Little Egret on St. Thomas. Count Salvadori suggests that it is not improbable that the white form of *Ardea gularis* is referred to.

45. **Butorides atricapilla*.

Butorides atricapilla (Afzel.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 38; Bocage, Journ. Sci. Lisboa, 1905, p. 86.

a. ♀ ad. (No. 67). Near São Thomé. 1. ii. 09.

A single example was obtained by Alexander, who remarks that it was breeding. He found that it frequented the small streams in the island.

46. *Bubulcus lucidus*.

Bubulcus lucidus (Rafin.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 39.

Bubulcus ibis Bocage, Journ. Sci. Lisboa, 1905, p. 86.

This Egret has been recorded on several occasions from St. Thomas. It is also said to breed on Rolas Islet (Bocage, Journ. Sci. Lisboa, 1891, p. 83).

47. *Arenaria interpres*.

Arenaria interpres Linn. ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 39.

Strepsilas interpres Bocage, Journ. Sci. Lisboa, 1905, p. 87.

Bocage received examples of the Turnstone from St. Thomas and from Rolas Islet (Journ. Sci. Lisboa, 1889, p. 35; 1891, p. 84).

48. **Totanus hypoleucus*.

Tringoides hypoleucos (Linn.) ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 39.

Tringa hypoleucus Bocage, Journ. Sci. Lisboa, 1905, p. 87.

a. ♀ . ad. (No. 134). *Zalma*. 1. ii. 09.

The Common Sandpiper has already been recorded from St. Thomas and Rolas Islet by Bocage.

49. *Totanus glareola*.

Totanus glareola Linn. ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 39 ; Bocage, Journ. Sci. Lisboa, 1905, p. 87.

The Wood-Sandpiper was obtained on St. Thomas by Francisco Newton.

50. *Numenius phæopus*.

Numenius phæopus Linn. ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 39 ; Bocage, Journ. Sci. Lisboa, 1905, p. 87.

The Whimbrel is mentioned by most writers on this island. Count Salvadori gives a complete list of references.

51. *Sterna fuliginosa*.

Sterna fuliginosa Gmel. ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 40 ; Bocage, Journ. Sci. Lisboa, 1905, p. 89.

Bocage received a specimen of the Sooty Tern from Francisco Newton, who had obtained it off St. Thomas.

52. *Sterna anæsthesa*.

Sterna anæsthesa Scop. ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 41 ; Bocage, Journ. Sci. Lisboa, 1905, p. 89.

Bocage records this Tern on the authority of Francisco Newton from the islets of Sette-Pedras (Journ. Sci. Lisboa, 1891, p. 84).

53. **Anous stolidus*.

Anous stolidus (Linn.) ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 41 ; Bocage, Journ. Sci. Lisboa, 1905, p. 89.

a. ♂ ad. (No. 3). São Thomé. 18.i.09.

A single specimen of the Noddy was captured by Alexander on board his boat.

Bocage received several specimens from the islets of Sette-Pedras and Rolas, together with eggs from the first-named (Journ. Sci. Lisboa, 1891, p. 84).

54. *Oceanodroma castro*.

Procellaria sp. ? Bocage, Journ. Sci. Lisboa, 1891, p. 84 ; id. 1905, p. 90.

Oceanodroma castro (Harcourt) ; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 41.

Count Salvadori is undoubtedly right in his identification of this Petrel from the minute account published by Bocage. It is an interesting occurrence, and I regret that, when I wrote my paper "On the Distribution of the Tubinares in the North Atlantic Islands" ('Ibis,' 1914, p. 438), I overlooked the fact that the Madeiran Fork-tailed Petrel had been taken in the Gulf of Guinea. The specimen which Bocage procured was captured by the fishermen of Angolares (a fishing-village in St. Thomas) "at a great distance from the shore," and I presume that the skin is preserved in the Lisbon Museum.

The type-locality of *O. castro* is the Desertas Islands (Madeira Group), besides which it is known to breed in the Azores, Salvage Islands, Cape Verde Islands, and St. Helena. Lack of sufficient material induced me to unite the Atlantic and Pacific forms of this Petrel ; but in a recent paper ('Auk,' 1914, p. 388) Mr. T. Nichols has shown that there are two distinct forms in the Pacific:—*O. castro cryptoleucura* (Ridgw.), inhabiting the Sandwich Group (Hawaiian Islands), and *O. castro bangsi* Nichols., recently described from the Galapagos and Cocos Islands. I have not yet had an opportunity of comparing these two subspecies from the Pacific Islands.

55. *Rallus cærulescens*.

Rallus cærulescens Gmel.; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 40; Bocage, Journ. Sci. Lisboa, 1905, p. 87.

Bocage and Sousa both record this Rail from St. Thomas.

56. *Crecopsis egregia*.

Crecopsis egregia (Peters); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 40.

Ortygometra egregia Bocage, Journ. Sci. Lisboa, 1905, p. 88.

Discovered on St. Thomas by Francisco Newton. His specimens are apparently all in the Lisbon Museum.

57. **Gallinula chloropus meridionalis*.

Stagnicola meridionalis Brehm, Vogelf. 1855, p. 331.

Gallinula chloropus (Linn.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 40; Bocage, Journ. Sci. Lisboa, 1905, p. 88.

a. ♀ ad. (No. 66). Near São Thomé. 2.ii.09.

b. ♀ ad. (No. 120). Zalma. 5.ii.09.

Count Salvadori thought it very doubtful whether any form of *G. chloropus* had really been obtained in St. Thomas. The bird in the Lisbon Museum, which Hartlaub and Bocage referred to *G. chloropus*, is pronounced by Salvadori to be *Gallinula angulata* Sund. The typical form, *Gallinula chloropus*, does not range further south in Africa than Egypt. Mr. Claude Grant has gone into the question of the allied races of the Moorhen*, and reference should be made to his paper for further information. He has come to the conclusion that the Moorhen inhabiting the west coast of Africa and the islands in the Gulf of Guinea is unquestionably *Gallinula c. meridionalis* (Brehm), with which opinion I concur.

This Moorhen is found inhabiting the islands of St. Thomas and Annobon, but up to the present time has not been recorded from Fernando Po or Prince's Island.

* See p. 47 of this number.

58. *Gallinula angulata*.

Gallinula angulata Sund.; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 40; Bocage, Journ. Sci. Lisboa, 1905, p. 88.

Recorded by Sousa from St. Thomas. Bocage seemed to doubt whether *G. angulata* had occurred on St. Thomas. Count Salvadori has examined the specimen sent to the Lisbon Museum, and has satisfied himself that the example was undoubtedly *G. angulata*. *G. angulata* should never be confused with *G. chloropus*, as, apart from its much smaller size, it has the base of the lower mandible yellow instead of red as in *G. chloropus* and its subspecies.

59. **Porphyrio alleni*.

Porphyrio alleni Thomps.

a. ♀ juv. (No. 63). Near São Thomé. 1. ii. 09.

Allen's Gallinule is here recorded from St. Thomas for the first time. According to Count Salvadori it has not hitherto been procured on any of the islands in the Gulf of Guinea.

60. **Vinago sancti-thomæ*.

Vinago sancti-thomæ (Gmel.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 35; Reichenow, Vögel Afrikas, i. 1901, p. 394.

Treron crassirostris Fraser; Bocage, Journ. Sci. Lisboa, 1905, p. 83.

a, b. ♀ ♀ ad. (Nos. 29, 30). Lake Amelia. 25. i. 09.

This fine Fruit-Pigeon is restricted to the island after which it has been named and to the adjacent Rolas Islet.

In the 'Catalogue of Birds,' xxi. p. 17, Count Salvadori included the St. Thomas Fruit-Pigeon under the name *Vinago crassirostris* (Bonap.). His reasons for now upholding Gmelin's name are set forth in his paper.

Alexander writes:—"It frequents the tall forest-trees. Its movements are always disclosed in the forest by its noisy wing-beats. The note, which is a crooning rattle, is a double one."

61. *Columba thomensis*.

Columba thomensis Bocage; Reichenow, Vögel Afrikas, i. 1901, p. 405; Salvadori, Orn. Golfo d. Guinea, ii. 1903 p. 36; Bocage, Journ. Sci. Lisboa, 1905, p. 83.

I have not been able to examine a specimen of this Pigeon, but I should imagine that it is only an island-form of *C. arquatrix* Temm., and should therefore be known as *Columba arquatrix thomensis*.

The St. Thomas Pigeon is evidently an exceedingly rare bird confined to that island and to the islet of Rolas. No recent collections from these islands appear to have contained examples.

C. thomensis was first mentioned by Bocage in the Journ. Sci. Lisboa, 1887, p. 87, and described by him as *C. arquatrix* var. *thomensis* in the same Journal for 1888, p. 230.

In the 'Catalogue of Birds,' xxi. p. 277 (footnote), a translation of the original description is given. See also Reichenow.

62. **Turturæna malherbei*.

Turturæna malherbei (Verr.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 37; Bocage, Journ. Sci. Lisboa, 1905, p. 84; Bannerman, Ibis, 1914, p. 629.

a. ♀ ad. (No. 63). Near São Thomé. 2. ii. 09.

This specimen is said by Alexander to have been breeding when he shot it.

63. **Streptopelia senegalensis*.

Turtur senegalensis (Linn.); Bocage, Journ. Sci. Lisboa, 1905, p. 84.

a, b. ♂ ♀ ad. (Nos. 95, 97). Zalma. 4. ii. 09.

c. ♂ ad. (No. 96). „ 5. ii. 09.

d. ♂ ad. (No. 94). „ 6. ii. 09.

When Count Salvadori published his list, the Senegal Turtle-Dove had not hitherto been recorded from any of the islands of the Gulf of Guinea. Its occurrence in St. Thomas was not, however, unknown. Bocage recorded two birds of this species from the island, but considered that their occurrence there might have been accidental. It

would appear, however, that the Senegal Turtle-Dove has now obtained a footing in St. Thomas.

64. **Haplopelia simplex*.

Haplopelia simplex (Hartl.); Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 37; Bocage, Journ. Sci. Lisboa, 1905, p. 84.

a-c. ♂ ♂ ad. et ? imm. (Nos. 28, 55, & 27). Lake Amelia. 22-25. i 09.

d, e. ♀ ♀ imm. (Nos. 64, 65). Near São Thomé.

f-p. ♂ ♂ ♀ ♀ ad. et imm. (Nos. 83, and 98 to 197 inclusive). Zalma.

Legs and feet dark claret-red.

Alexander procured a very fine working series of examples of this Dove, showing many interesting phases of plumage. Dr. Reichenow (*Vögel Afrikas*, i. p. 422) includes also *Haplopelia principalis* as synonymous with *H. simplex*. In this I do not agree with him, and prefer to follow Count Salvadori, who maintains that the Prince's Island Pigeon is a perfectly distinct species (*vide* Bannerman, "Birds of Prince's Island," 'Ibis,' 1914, p. 630).

A careful examination of the series of *H. simplex* obtained in St. Thomas shows that in adult examples, if the sexes have been correctly ascertained by Alexander, males and females do not differ, and have the same dark brown back washed with grey and grey underparts. Younger examples of both sexes have the upperparts more umber-brown and the underparts pale brown tinged with rufous or buff.

Alexander, writing of this species at Lake Amelia, says:—"It is not common, frequenting the forest. It is difficult of approach. When disturbed it gets up from the undergrowth and perches not far off, where it remains silent. It is more often seen towards evening." Writing from near São Thomé, the port on the north coast of the island, he notes:—"This Pigeon is found frequenting the thick osier-like beds of the streams, also the palm-groves. Its note is a soft croon. It is now breeding--2nd of February."

In his diary Alexander particularly remarks that specimen

no. 64 was breeding. This bird has not yet assumed the fully adult plumage, but appears to be in an intermediate stage.

According to Bocage the species has also been taken on Rolas Islet, which is situated close to St. Thomas.

65. **Coturnix delegorguei*.

Coturnix delegorguei Deleg.; Salvadori, Orn. Golfo d. Guinea, ii. 1903, p. 37; Bocage, Journ. Sci. Lisboa, 1905, p. 84.

a. ♀ ad. (No. 78). Zalma. 1. ii. 09.

b. ♂ ad. (No. 121). „ 4. ii. 09.

c. ♂ ad. (No. 122). „ 7. ii. 09.

This Quail is said by Alexander to be common on waste land and in the vicinity of native farms. He met with it in pairs and found it breeding in the beginning of February. The male calls loudly in the early morning and evening, also just before rain.

The following is a list of doubtful or erroneously identified species which have been said to occur on St. Thomas. It is based entirely on Count Salvadori's list (Orn. Golfo d. Guinea, ii. pp. 42-45), to which I have nothing to add; I entirely agree with all he has to say, having carefully verified his grounds for rejecting each species:—

1. *Melænornis edolioides* (Swains.).

2. *Chlorophoneus olivaceus* (Shaw).

3. *Chlorophoneus sulphureopectus* (Less.).

All mentioned by Allen and Thompson (Exped. Niger, ii. 1848) from Rolas Islet.

4. *Passer simplex* (Swains.).

Hartl. J. f. O. 1861, p. 260.

5. *Lamprocolius ignitus* (Nordm.).

Hartl. J. f. O. 1854, p. 102.

6. *Neophron pileatus* (Burch.).

Hartl. Orn. Westafr. p. 1.

As already mentioned, if any Vulture visits St. Thomas

and Prince's Island it is much more likely to be *N. monachus* than *N. pileatus*.

7. *Psittacus erithacus* Linn.

Hartl. Orn. Westafr. p. 166.

Founded on the doubtful assertion of Lopez de Lima.

8. *Agapornis roseicollis* (Vieill.).

Hartl. J. f. O. 1861, p. 262.

9. *Cuculus canorus* Linn.

Sousa, Journ. Sci. Lisboa, 1888, p. 152.

It certainly would not be suprising to find the Cuckoo occasionally visiting the island on migration.

10. *Ceryle maxima* (Pall.).

Hartl. J. f. O. 1861, p. 106.

11. *Halcyon canerophaga*.

Hartl. (nec Lath.) J. f. O. 1861, p. 104.

It seems doubtful to what species this record refers.

12. *Merops superciliosus* Linn.

Recorded only by Gujon (*vide* Finsch & Hartl. Vögel Ost-Afrik. 1870, pp. 179-180).

13. *Dicrocercus furcatus* (Stanl.).

Merops hirundineus Hartl. (nec Vieill.) J. f. O. 1861, p. 107.

14. *Melittophagus pusillus* (Müll.).

Merops erythropterus Gmel. ; Hartl. J. f. O. 1861, p. 107.

15. *Chalcopelia afra* Linn.

Recorded only by Allen and Thompson (*op. cit.*) from Rolas Islet as *Turtur chalcospilos* (Wagl.).

16. *Turtur semitorquatus* (Rüpp.).

Allen and Thompson (*op. cit.*) record it from Rolas Islet. Count Salvadori suggests that this may refer to *Turturæna malherbei*.

17. *Phyllopezus africanus* (Gmel.).

Hartl. J. f. O. 1861, p. 271.